



2018

**King County Department
of Natural Resources and Parks
Annual Report**



Environmental Stewardship in King County



King County



Contents

Letter from the Executive	3
Letter from the Director	4
King County by the Numbers	6
Strategic Initiatives in the Director's Office	8
Equity and Social Justice in DNRP	10
Performance Management and Continuous Improvement	11
DNRP Awards	12
Parks and Recreation Division	14
Solid Waste Division	16
Water and Land Resources Division	18
Wastewater Treatment Division	20
DNRP Financials	22
Acknowledgments and Contact Information	23

Cover photos by Beth Shepherd Photography

From the

Executive



Beth Shepherd Photography

King County's commitment to our natural environment is second to none, and our Department of Natural Resources and Parks employees do extraordinary work every day to ensure King County remains a wonderful place to live, work, and play.

Environmental Stewardship in King County highlights some of DNRP's most important accomplishments of 2018. Through their efforts, the dedicated employees of DNRP are getting results for the people of King County:

- Tackling climate change by developing innovative policy, taking practical actions, and committing to reduced impacts;
- Strengthening and extending a regional trail system that offers great recreation and real commute alternatives for people seeking to leave their cars at home;
- Providing outstanding customer service that is efficient, cost effective, and truly reflects our dedication to innovation and being the best-run government;
- Fairly and equitably delivering services to, and managing the impacts of, King County's 2.2 million residents; and
- Protecting the cherished places of this growing region for future generations to enjoy and appreciate.

I want to highlight just two of the many critical countywide initiatives in which DNRP employees have led the way.

I launched a Land Conservation Initiative to preserve 65,000 acres of irreplaceable wilderness and open space within a generation, and to improve access to outdoor recreation in underserved communities.

Approximately 740 acres were preserved in 2018, including land conserved for critical fish and wildlife habitat. It's a great start to an effort to safeguard our remarkable quality of life here in King County.

And, as part of my Clean Water, Healthy Habitat agenda, I created a fish passage restoration program to remove old culverts and restore more than 150 miles of habitat for imperiled salmon populations.

A great example of this work occurred along the Lake Sammamish shoreline, where our project to improve the East Lake Sammamish Trail included the replacement of a fish-blocking culvert on Zackuse Creek. This upgrade makes it easier for desperately imperiled Lake Sammamish kokanee salmon to reach protected spawning habitat upstream.

These are just two examples of the important work that DNRP employees accomplished in 2018. I thank them for their extraordinary commitment to environmental stewardship, and I look forward to new successes in 2019.

Dow Constantine

Dow Constantine
King County Executive

From the



Director

very day, employees with the King County Department of Natural Resources and Parks show their unwavering commitment to stewardship of our unique environment that is the wellspring of our tremendous quality of life.

Guided by Executive Constantine's priorities – responding to climate change, building the best-run local government, enhancing regional mobility, and ensuring equity and social justice for all – DNRP's 1,800 employees achieved great things in 2018. Here are a few highlights:

- Saving more than 4 million kilowatt hours annually, we reached our goal of completing high efficiency LED lighting replacements in all buildings and facilities. This cuts carbon emissions by 2,000 metric tons, and is the equivalent to the annual power needs of more than 450 homes.
- Making good on our commitment to clean water and healthy habitat, we broke ground on the Georgetown Wet Weather Treatment Station that will treat up to 70 million gallons of stormwater runoff that

can flow into the Duwamish River in severe rainstorms. It is one of 12 projects nationally to receive low-interest loans covering nearly half of the construction cost, and saving millions of ratepayer dollars.

- Teaming with Metro Transit, with additional funding from Seattle Department of Transportation, REI Co-op and Clif Bar and Company, we completed the first full year of Trailhead Direct transit-to-trails service and tallied more than 20,000 trips from Seattle, Issaquah and North Bend to popular trailheads. The pilot project helps increase access to trails and cut trailhead congestion.
- Working with its advisory committees and informed by public input, the Solid Waste Division (SWD) completed a draft Comprehensive Solid Waste Management Plan – the Division's long-range roadmap for achieving a 70 percent recycling rate, providing solid waste transfer services in northeast King County, and ensuring long-term garbage disposal. The plan was submitted to the King County Council for review and approval.
- Partnering with local, state, federal and tribal partners, we took emergency actions to protect the unique Lake Sammamish kokanee salmon from slipping closer to extinction. Work included capturing returning spawners for a hatchery program, using cryopreservation for this unique genetic stock, and restoring habitat and stream access.
- Highlighting the values of an interconnected regional trails

network that promotes economic, human, and environmental health, Parks hosted a regional trails summit where participants discussed the mobility revolution of e-bikes and dockless bike share, and expanding the regional trails network via public-private partnerships.

- Furthering its commitments to protecting water quality and being a good neighbor, the Wastewater Treatment Division completed repairs to a 3,000-foot pipeline in Seattle's Magnolia neighborhood with a trenchless construction technique that minimized neighborhood impacts. The pipe stores excess stormwater and wastewater from the combined sewer system until it can be treated.
- Working with a robust group of partners, including cities, tribes, nonprofits and businesses, King County neared the halfway point toward a goal of planting a million trees by the end of 2020 as part of the Executive's Strategic Climate Action Plan. Trees store carbon pollution and contribute to clean air and water, healthy habitat for salmon and other wildlife, and more livable communities.
- Building on a legacy of hosting marquee national and international competitions that stretches back nearly 30 years, the Weyerhaeuser King County Aquatic Center (WKCAC) hosted the 2018 Special Olympics USA Games swimming competitions. Athletes from across the nation participated in a number of races over five days at the WKCAC.
- Acting on the deeply held commitment of ensuring equitable access to services for all of its customers, SWD established



Cleanup LIFT—a \$12 discounted disposal fee for lower income customers who bring their garbage and recycling to a King County facility. An estimated 300,000 customers are eligible for the discounted rate.

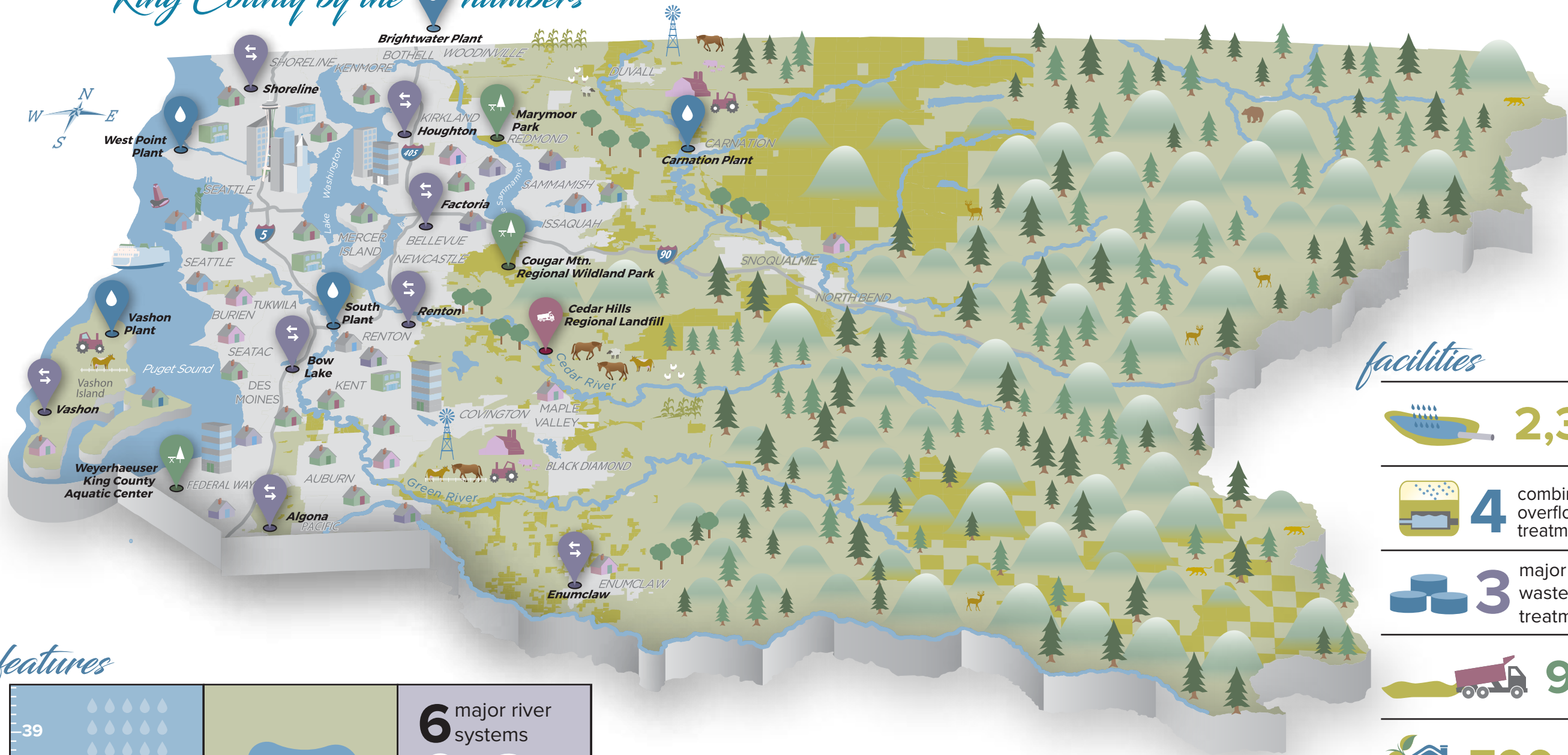
- Responding to China's restrictions on imports of recyclables for processing, SWD and a coalition of cities, solid waste management companies and others studied ways to improve recycling. The coalition began a Recycle Right campaign to help people recycle effectively, and produced a report with additional recommendations for better recycling outcomes.

I want to thank all of my colleagues for their hard work in 2018, and I look forward to continued future success.

Christie J. True

Christie True, Director

King County by the numbers



- Wastewater Treatment Plants
- Solid Waste Transfer Stations
- Cedar Hills Regional Landfill
- Major Regional Parks Facilities
- King County Parks and Protected Natural Lands

facilities

2,369 commercial and residential stormwater control facilities

4 combined sewer overflow (CSO) treatment plants

1 CSO treatment plant under construction

3 major regional wastewater treatment plants

2 smaller treatment plants

920 acres Cedar Hills Regional Landfill

700 low impact development sites

features

38 inches avg. annual precipitation

760 lakes and reservoirs

6 major river systems

3,000 miles of streams

100 miles of marine coastline

3 federally protected salmon species

850,000 acres of forest lands

2,131 square miles

2,188,649 population

975 wetlands

353 miles of underground wastewater pipes and tunnels

8 solid waste transfer stations

2 rural drop boxes

500 flood facilities and revetments totaling **119** miles more than

28,000 acres of parks and natural lands

215 miles of backcountry trails

200 parks

Strategic Initiatives in the Director's Office

DNRP Director's Office employees help develop strategies for executive initiatives that cross department and division boundaries. Here are highlights of the work accomplished in 2018.



Land Conservation Initiative

Executive Constantine launched an initiative in late 2016 to preserve the county's last remaining high conservation value open spaces, working resource lands and trail corridors. King County acquired 51 properties in 2018, protecting roughly 740 acres at a cost of about \$16.3 million. An Open Space Equity Cabinet composed of community leaders and residents to make recommendations on changes to King County code and grant programs was established to help guide investments and eliminate open space inequities.

Salmon recovery

The partnership continued between King County, state, federal, local and tribal governments, non-government

organizations and private landowners to restore native imperiled Lake Sammamish kokanee salmon. Following three consecutive years of extremely poor spawning salmon returns, partners began emergency actions that include captive broodstock, DNA cryopreservation, egg boxes, and environmental conditions monitoring. Parks and the City of Sammamish replaced three fish-blocking culverts on Zackuse Creek to restore the kokanee's access to spawning habitat.

Eastside Rail Corridor (ERC)

Work continued on the County's 16.7-mile-long portion of the ERC trail. A 4-mile-long trail was built from Gene Coulon Park in Renton to Newcastle Beach Park in Bellevue,

with connections to the existing Lake Washington Loop Trail and the Lake to Sound Trail. Work also took place from the Cross Kirkland Corridor at 108th Avenue Northeast to Northrup Way, with a State Route 520 Trail connection.

Climate change

DNRP contributed to regional progress to reduce greenhouse gas emissions through leadership of the King County-Cities Climate Collaboration. By the end of 2018, more than 500,000 trees were planted as part of the 1 Million Trees initiative in partnership with businesses, cities, non-profits and individuals. The County also took new steps to engage and partner with communities on climate action, while leading on regional climate preparedness as a founding member and co-chair of the Puget Sound Climate Preparedness Collaborative.

Energy planning

The department completed its installation of high efficiency LED lights throughout all facilities, collectively replacing lamps in over 11,000 fixtures. Biomethane production at South Treatment Plant set another record for the highest volume of gas injected into the pipeline. Parks' North Utilities Shop became King County's first zero energy facility. New solar energy installations, including more than doubling the system size at the Weyerhaeuser King County Aquatic Center, have established the county as a regional solar leader, with over 510 kW of installed capacity.

Performance management

DNRP uses performance information to seek guidance from stakeholders and elected leaders, target resource use, clarify direction for employees, and improve overall service delivery. Improvements in DNRP performance systems are focused on implementing the King County Strategic Plan and delivering work program expectations throughout the department.



Local Food Initiative

Implementing Executive Constantine's Local Food Initiative to create a stronger food system in King County continues with efforts to increase farmer access to land, improved training and technical assistance to farmers, and rebuilding food system infrastructure. A countywide farmers market promotion program and hosting the annual CHOMP! local food festival raised awareness of food and farm products produced here.

Historic Preservation

The Historic Preservation Program stepped up outreach and assistance to regional preservation partners and as a result, historic properties in the cities of Snoqualmie, Tukwila, Kirkland, Issaquah, Kenmore, and Enumclaw were designated as landmarks. The properties represent the rich and varied histories of their communities, and their owners are now eligible for grants and other financial incentives to help maintain and rehabilitate them.

Community Service Area (CSA) Program

The CSA Program continued its work to engage and improve communication with unincorporated King County residents, providing 65 CSA grants totaling \$90,000. Grants helped communities restore walking and equestrian trails; host outdoor movie nights; buy new equipment for Little League baseball teams, and more. The program moved to the newly formed Department of Local Services at the end of 2018.



Equity and Social Justice in DNRP

Equity and social justice is a priority in King County and central to the mission of DNRP. The department's efforts are guided by the ESJ ordinance, the ESJ strategic plan, as well as the voices and concerns of employees, customers, ratepayers, and other stakeholders.

DNRP is strengthening its shared capacity to routinely drive toward pro-equity outcomes in all of the community and environmental conditions that the department's vast array of services touch.

In 2018-19, DNRP is implementing the guidance of the King County Equity and Social Justice Strategic Plan through several practice and process improvements, with goals and objectives for the organization and for its interactions with communities.

The department's equity and social justice core team includes goal leads, division liaisons, an executive's office sponsor, training coordinator, and liaisons to countywide teams.

Recent accomplishments and results include:

- Low-income discounts in select fees and rates in all divisions;
- Easier access to DNRP grant-making programs and funding opportunities;
- Coordinated and inclusive new hire recruitment processes;
- Coordinated community partnerships across divisions and programs;
- Pro-equity practices in capital project delivery;
- Equity-related performance expectations in leadership performance appraisals;
- Supervisors' toolkit to build skills

and foster inclusivity; and

- Communications to program employees.

Four themes and strategies cut across the ESJ goals:

- Pointing resources upstream and where the needs are greatest;
- Investing in community partnerships, to leverage important capacity where it exists;
- Investing in employees, as their knowledge, skills and empowerment are fundamental; and
- Calling for and expecting accountable and transparent leadership.

A few priorities in the coming year include:

- Improving green job pipelines and readying for workforce demographic improvements;
- Focusing on capital project selection, planning, design and delivery to advance equity and social justice; and
- Coordinating and integrating community and civic partnering to reduce fragmentation and confusion about projects and roles.



Performance management and continuous improvement

The King County Department of Natural Resources and Parks has a performance-oriented culture and a long history of using performance information to:

- Strengthen accountability with elected leaders, ratepayers, residents, and other stakeholders;
- Monitor program effectiveness to guide continuous improvements;
- Foster engagement with regional partners by identifying shared outcomes; and
- Convey priorities and expectations throughout levels of the organization.

Our community and environmental monitoring efforts help diagnose problem areas, guide resource allocation, and provide a better understanding of the degree our actions are resulting in the improvements we intend.

In support of the goals of the King



County Strategic Plan, DNRP is improving processes and customer service through Lean techniques and business planning.

A Lean effort in one section was recently recognized for significantly improving employee satisfaction. Another success was using a Lean process to identify barriers in pro-equity practice improvements, and prioritize actions in our capital program.

DNRP is investing in leadership and staff development to build Lean skills and help achieve its organizational goals of environmental quality, healthy people and communities, fiscal stewardship and a quality workforce.

Many thanks to the many DNRP employees who drive performance improvements on a routine basis - and to the customers and stakeholders who provide the feedback we use to improve the department's service.

DNRP



INTERNATIONAL

Factoria Recycling and Transfer Station SOLID WASTE DIVISION

Gold Excellence Award, Transfer Station
Solid Waste Association of North America

NATIONAL

Factoria Recycling and Transfer Station SOLID WASTE DIVISION

Engineering Excellence Award
American Council of Engineering Companies

Factoria Recycling and Transfer Station SOLID WASTE DIVISION

Honor Award, Industrial Waste Practice
American Academy of Environmental
Engineers and Scientists

EnviroStars

LOCAL HAZARDOUS WASTE MANAGEMENT PROGRAM

Safer Choice Partner of the Year
Environmental Protection Agency

HoloLens Mixed Reality Operator Training WASTEWATER TREATMENT DIVISION

Digital Edge 50 Award for Digital Transformation
CIO.com / IDG Communications, Inc.

Georgetown Wet Weather Treatment Station WASTEWATER TREATMENT DIVISION

Envision Platinum Award
Institute for Sustainable Infrastructure

Vashon Treatment Plant WASTEWATER TREATMENT DIVISION

2017 Peak Performance Platinum Award
National Association of Clean Water Agencies

South Treatment Plant WASTEWATER TREATMENT DIVISION

2017 Peak Performance Platinum Award
National Association of Clean Water Agencies

Brightwater Treatment Plant WASTEWATER TREATMENT DIVISION

2017 Peak Performance Gold Award
National Association of Clean Water Agencies

Carnation Treatment Plant WASTEWATER TREATMENT DIVISION

2017 Peak Performance Platinum Award
National Association of Clean Water Agencies

STATE

Factoria Recycling and Transfer Station SOLID WASTE DIVISION

Sustainable/Resilience Category
Washington Aggregates and Concrete Association

Factoria Recycling and Transfer Station SOLID WASTE DIVISION

Construction Excellence Award
Associated General Contractors of Washington

Factoria Recycling and Transfer Station SOLID WASTE DIVISION

Silver Award, Environmental
American Council of Engineering Companies

South Treatment Plant WASTEWATER TREATMENT DIVISION

Outstanding Wastewater Treatment Plant Award
Washington State Department of Ecology

Vashon Treatment Plant WASTEWATER TREATMENT DIVISION

Outstanding Wastewater Treatment Plant Award
Washington State Department of Ecology

Carnation Treatment Plant WASTEWATER TREATMENT DIVISION

Outstanding Wastewater Treatment Plant Award
Washington State Department of Ecology

LOCAL

Algona Transfer Station SOLID WASTE DIVISION

Gold Award
King County Industrial Waste Program



REGIONAL

Factoria Recycling and Transfer Station SOLID WASTE DIVISION

Green Project Award for Innovation and Sustainability
Northwest Construction Consumer Council

Factoria Recycling and Transfer Station SOLID WASTE DIVISION

Best Project, Government/Public Building
Engineering News Record Northwest

River Safety Elementary School Roadshow PARKS AND RECREATION DIVISION (with Triangle Associates)

Totem Award, Public Service
Public Relations Society of America

Recicla Más

SOLID WASTE DIVISION

Totem Award, Social Media
Public Relations Society of America

EnviroStars

WATER AND LAND RESOURCES DIVISION/Rural and Regional Services Section/Local Hazardous Waste Management Program

Pollution Prevention Champion
North American Hazardous Materials Management Association

Fremont Siphon Replacement and Odor Control Facility WASTEWATER TREATMENT DIVISION

Bronze Award for Complexity
American Council of Engineering Companies of Washington

Barton Combined Sewer Overflow Control Project WASTEWATER TREATMENT DIVISION

2018 Gold Award
American Council of Engineering Companies of Washington

Barton Combined Sewer Overflow Control Project WASTEWATER TREATMENT DIVISION

2018 Award of Excellence for General Design, Public
Washington Chapter of the American Society of Landscape Architects

Murray Combined Sewer Overflow Control Project WASTEWATER TREATMENT DIVISION

2018 Award of Excellence for General Design, Public
Washington Chapter of the American Society of Landscape Architects

Murray Combined Sewer Overflow Control Project WASTEWATER TREATMENT DIVISION

2018 Municipal Water Protection Award
Pacific Northwest Clean Water Association

Murray Combined Sewer Overflow Control Project WASTEWATER TREATMENT DIVISION

Engineering Excellence Award
American Council of Engineering Companies of Washington

South Plant Effluent Transfer Station Variable Frequency Drive Replacement WASTEWATER TREATMENT DIVISION

Best Public Project Under \$10 Million
Northwest Construction Consumer Council



Parks and Recreation Division

2018 ACCOMPLISHMENTS

Open Space Protection and Recreation

Parks protected 490 acres of habitat through more than 28 acquisitions, leveraging \$15.5 million in grant funding. Notable acquisitions included Little Lake Forest near Enumclaw, the De Leo family property, which will expand Cougar Mountain Regional Wildland Park, and additions to Vashon Island's Frog Holler Forest.

The division achieved Forest Stewardship Council (FSC) certification at five sites, reaffirming its commitment to forest health and sustainability and bringing its total FSC-certified forestlands to 3,300 acres. Parks performed forest stewardship activities at Taylor Mountain and Henry's Ridge Open Space as part of King County's One Million Trees initiative. By removing trees, like aging alders, and planting nearly 50,000 conifer seedlings (early 2019), King County improved forest health, diversity and resiliency.

Regional Trails

Parks hosted a Regional Trails Summit, which spurred the formation of a broad-based coalition to enhance collaboration on regional trails in King County and beyond. The division achieved major milestones: on the Eastside Rail Corridor, by opening 5 miles of interim gravel trail; and on the East Lake Sammamish Trail, by



MISSION

Steward, enhance and acquire parks to inspire healthy communities.

The Parks and Recreation Division stewards 200 parks, 175 miles of regional trails, and 28,000 acres of open space across King County, including such regional treasures as Cougar Mountain Regional Wildland Park, Marymoor Park, and the Weyerhaeuser King County Aquatic Center. By cultivating strong relationships with non-profit, corporate, and community partners, Parks provides recreational opportunities and protects the region's public lands, leaving a legacy for future generations.

completing the South Sammamish Segment A. Parks partnered with the City of Tukwila to improve safety and access for cyclists and pedestrians connecting from the Green River Trail to the Tukwila Transit Center. Parks also finalized designs for segments of the Foothills and Lake to Sound trails.

Community Partnerships and Youth and Amateur Sports Grants

The Community Partnerships and Grants Program continues to develop partnerships to build, operate, and maintain new or enhanced public facilities. Parks worked with Evergreen Mountain Bike Alliance and other groups on trail improvements. The division is helping projects move forward at Preston Mill Park, Pinnacle Peak Park, Northshore Athletic Fields, Skyway Park, Mel Olsen Stadium in Steve Cox Memorial Park, and Redmond Ridge.

King County developed the new Youth and Amateur Sports Grants program to support community-based organizations and nonprofits. Parks began a competitive grant process that awarded 45 grants totaling \$3.6 million to nonprofits working to increase access to physical activity, especially for underserved youth.

Trailhead Direct—co-led by King County Metro and King County Parks—offered seasonal service to some of the most popular hiking destinations in the region. Hikers boarded Trailhead Direct for more than 10,000 round trips during the first full season of the transit-to-trails pilot service.

CHOMPI!, King County's local sustainability celebration, saw its highest attendance yet, with some 6,000 people enjoying music, food, crafts, and fun from local farms and other organizations. Parks also partnered with community groups and local cities to present the "Big Backyard Movies," an outdoor cinema series at King County parks and other locations that attracted 2,800 moviegoers.

Volunteers

Some 7,800 volunteers gave more than 41,000 hours of service to Parks in 2018 at 321 volunteer events. Volunteers helped plant 52,000 native trees as part of Parks' contribution to King County's effort to plant one million trees by 2020.

Business Development and Major Events

Parks secured more than \$6.2 million in revenue from major events, facility rentals, corporate sponsorships, and other activities to support operations and maintenance of the division's parks and trails, including signature events, like Cirque du Soleil, Marymoor Park Concerts, Movies@ Marymoor Outdoor Cinema, Timber! Outdoor Music Festival, and Cougar Mountain Trail Running Series.

OUTLOOK

Entering the final year of its current levy, Parks expects to achieve the goals of the 2014-2019 Parks, Trails and Open Space Replacement Levy. It is also preparing for the challenge of securing funding to operate and care for the system in the future. In 2019, the division will unveil a new name and brand for its Regional Trails System, begin construction on two regional trail projects in south King County, and continue progress on planting one million trees by 2020.

The division is partnering with University of Washington and the Aspen Institute on "The State of Play: Seattle-King County" to evaluate youth access to programs, parks and facilities, and other opportunities for physical activity. The study will help shape the division's grant-making and future investments.

Solid Waste Division



MISSION

The Solid Waste Division brings the best people together to deliver value to our customers and stakeholders and continuously improve waste prevention, resource recovery, and waste disposal.

WHAT WE DO

The Solid Waste Division provides environmentally responsible solid waste transfer and disposal services in King County. The division operates eight transfer stations, two rural drop boxes, and the Cedar Hills Regional Landfill – the only operational landfill in the county. Our stakeholders include residents and business owners in unincorporated King County and 37 cities throughout the county. The division works closely with our stakeholders to continue leadership in waste prevention, resource recovery, and waste disposal.

2018 ACCOMPLISHMENTS

Recycling more and recycling right

In 2018, the division collected 32,175 tons of recycling at its facilities, a 12.5 percent increase compared to 2017. Yard waste was the most-recycled item with 15,927 tons collected.

In response to new rules China put in place that restricted the amount and types of collected recyclables that can be sent there for processing, King County brought together cities, garbage and recycling collection companies, and others to establish the Responsible Recycling Task Force. The task force sought to identify

common ground for advancing recycling and ensure the long-term strength of regional recycling.

One of the first actions taken by the Task Force was the creation of a “Recycle Right” campaign to help the public be as effective as possible when recycling. Key components of the campaign include making sure recycling is always empty, clean and dry; and checking with city or collection company guidelines about which materials are recyclable.

New disposal rates and a LIFT for low-income customers

In September, the Metropolitan King County Council gave its unanimous support for the division to make a modest increase to its solid waste disposal fees. The minimum fee for self-haulers to a King County recycling and solid waste transfer facility increased from \$24.25 to \$25.25. The typical single family curbside customer bill increased by \$0.34 per month.

To ensure equitable services to all of its customers, the division established Cleanup LIFT. This program provides a \$12 discount to customers who bring their garbage and recycling to a King County facility, and who show their ProviderOne, EBT or ORCA LIFT cards. An estimated 300,000 customers will

be able to take advantage of this new program. The new rates, as well as the Cleanup LIFT program took effect on Jan. 1, 2019.

Updating waste disposal services

In 2018, 888,503 tons of garbage were disposed of at the Cedar Hills Regional Landfill, a decrease of about 5 percent compared to 2017. The division’s recent ordinances that require construction and demolition debris to be sent to specific facilities for recycling is a reason for the decrease in tonnage.

Work continued on constructing a new disposal area at the landfill, Area 8. A total of 1.8 million cubic yards of soil were excavated to make room for the new area, and environmental controls, including liners and gas collection pipes, were installed. The division expects Area 8 will receive waste starting in 2019.

After making a siting decision on where to construct a new South County Recycling and Transfer Station in 2017, the division spent 2018 on preliminary design of the new facility. The South County Recycling and Transfer Station will replace the outdated Algona Transfer Station and will include recycling, yard waste and household hazardous waste disposal

—offering south county residents services that weren’t available at the old facility.

Waste-to-Energy at the Cedar Hills Regional Landfill provides good revenue

Bio Energy Washington contracts with the division to process landfill gas into pipeline-quality renewable natural gas (RNG) for sale to Puget Sound Energy. The division estimates it will receive \$8 million for sales of gas and renewable energy credits in 2018.

The RNG from the landfill displaces fossil fuel-based natural gas in a wide variety of industrial applications. In 2018 gas technicians at the landfill worked to optimize the landfill gas collection system and adjusted valves at more than 600 wellheads to collect the most high quality landfill gas.

OUTLOOK

After conducting its preliminary work that included looking into whether current and emerging technologies were available to strengthen domestic recycling markets and if any legislative actions could be taken to bolster recycling, the Responsible Recycling Task Force will develop a report of its findings in 2019. The report will identify actions and recommendations local governments and others can

take to ensure that what is put in the recycling bin can and will be turned into something new.

With Executive Constantine’s support, the Solid Waste Division sent its *Comprehensive Solid Waste Management Plan* to the King County Council for review. This far-reaching document looks at how the County will manage solid waste and recycling for the next six to 20 years. Plan highlights include how the County can achieve a 70 percent recycling rate, provide transfer services in northeast King County, and how to handle long-term garbage disposal. The division anticipates the draft plan will be adopted by the King County Council, its 37 city partners and the Washington State Department of Ecology in 2019.



Water and Land Resources Division

WHAT WE DO

In 2018, several innovative programs were launched to restore fish habitat, prevent pollution and sequester carbon. Nearly two dozen completed capital projects improved stormwater management, reduced flood risks, and restored aquatic habitat. Improved data showed a brighter picture for farmable land and a clearer picture of King County's aging stormwater infrastructure.

2018 ACCOMPLISHMENTS

The Fish Passage Restoration Program was launched to accelerate King County's work to provide fish with access to the best habitat as soon as possible. Working with tribes, public agencies, and partners, WLRD is developing a program to prioritize restoration projects at more than 1,000 stream crossings that currently obstruct fish access.

A 20 percent increase of the Surface Water Management fee was approved to retrofit, maintain, and construct stormwater runoff infrastructure. The fee increase will generate \$13 million and support the fish passage program, agricultural drainage, salmon recovery, and watershed approaches to stormwater management in basins like Bear Creek.

The King County Council also approved increased funding for the Noxious Weed Control Program, Hazardous Waste Management, and the Public Benefit Rating System (PBRs). The King County Flood Control District approved a 2019 budget of \$93 million with investments in flood risk reduction programs implemented by WLRD's River and Floodplain Management Section, the district's primary service provider.

Hazardous Waste Management launched a pilot grant project to local

dry cleaners to encourage switching from a carcinogenic solvent to a wet cleaning technology that is less expensive and safer. The program aims to eliminate the solvent from King County dry cleaners by 2025.

Another WLRD pilot project allows businesses to buy carbon credits from urban and rural forest lands that meet protection and management standards. The program is expected to generate funding for the Land Conservation Initiative.

The division led efforts to create the Poverty Bay Shellfish Protection District to address the bacterial problem threatening water quality in the bay's 1,000 acres of shellfish beds.

Nearshore habitat is critical to threatened salmon and orcas. In 2018, WLRD led a project to remove nearly 1,000 feet of shoreline armoring in the Maury Island Aquatic Reserve; lent support to improving the County's shoreline rules; and completed the WRIA 9 Marine Shoreline Monitoring and Compliance Project to help inform progress on shoreline restoration.

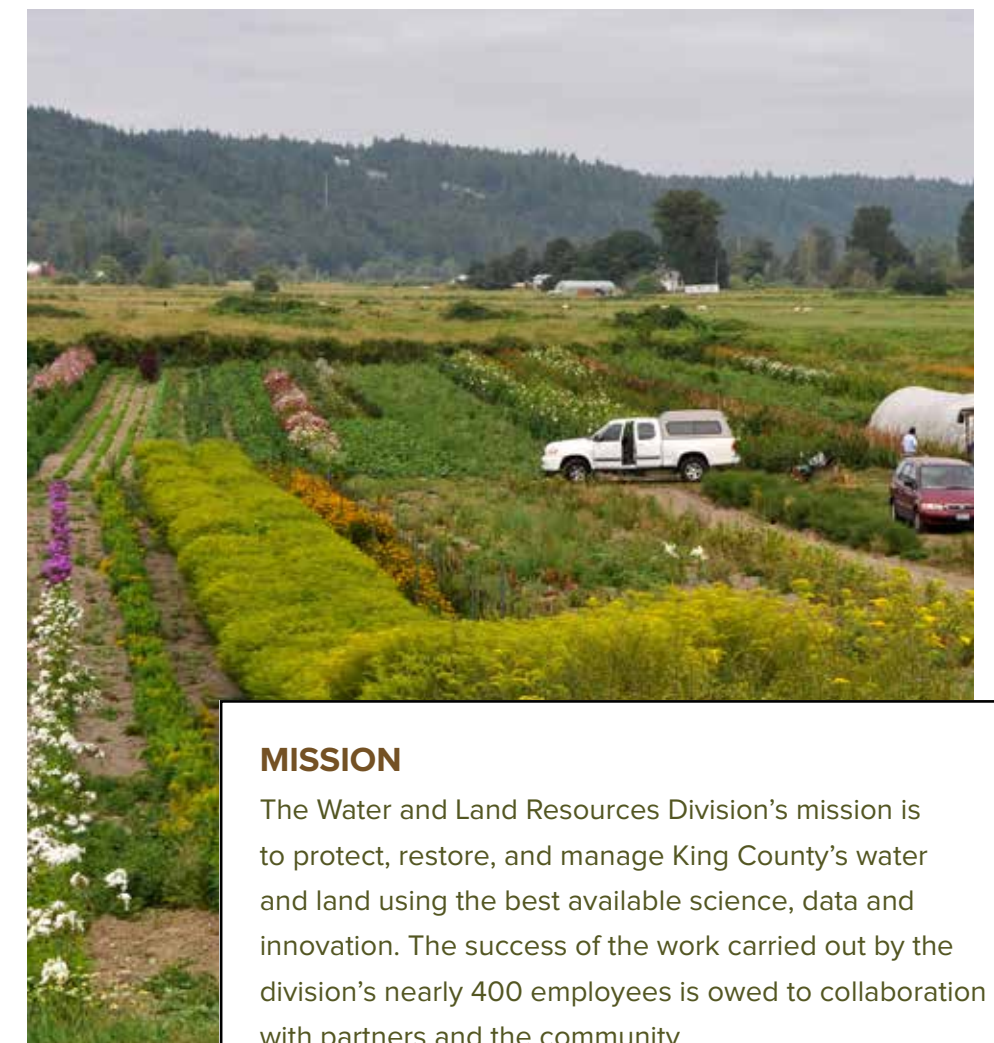
Twenty capital improvement projects were completed, many of which received funding from the King County Flood Control District. Highlights include the Tolt River Pipeline Protection Project to protect the pipeline that delivers drinking water to more than a million residents; the Teufel Mitigation Project and Porter Reach Restoration Project, both on the Green River; and six flood damage repair projects.

Two major capital projects were initiated at the Environmental Lab to ensure the safety of employees and the integrity of more than 50 years of environmental data. Replacement of the lab's fume hoods and the update of the Information Management System were initiated amidst two



emergency responses – one to help ailing orca “J50” in August and the other to protect against a four-alarm fire near the facility in November.

An agricultural land use survey was completed which identified approximately 500 more acres of land in food production than documented in 2013; the Working Farmland Partnership was launched with King Conservation District funding to connect landowners with farmers interested in establishing or expanding farming operations; 320 acres were enrolled in the Farmland Preservation Program and 675 acres in PBRs.



MISSION

The Water and Land Resources Division's mission is to protect, restore, and manage King County's water and land using the best available science, data and innovation. The success of the work carried out by the division's nearly 400 employees is owed to collaboration with partners and the community.

Scientists supporting the Lake Stewardship Program automated the process of analyzing and reporting on conditions for 12 city lakes, and 24 lakes in unincorporated areas resulting in analytical output being tripled. They also improved the accuracy of the County's system for calculating carbon emissions; explored novel ways to repopulate degraded streams with aquatic insects; and contracted with four cities to install and maintain streamflow and water level gages at 20 locations.

The division formalized a partnership agreement with King County's new Department of Local Services to provide and improve surface water management and stormwater services in support of the 250,000 residents in unincorporated areas.

OUTLOOK

In 2019, the County will begin removing 36, high-priority fish passage barriers, and design a prioritized program. WLRD will begin on an update to the King County Flood Hazard Management Plan, and a strategic forest plan will be completed. WLRD's research, data modeling, and on-the-ground work will continue to support County priorities including the Strategic Climate Action Plan; the Land Conservation Initiative; salmon recovery; 1 Million Trees; Fish, Farm, and Flood; the Local Food Initiative and Clean Water, Healthy Habitat.



Wastewater Treatment Division

WHAT WE DO

The Wastewater Treatment Division provides wholesale wastewater treatment services to 17 cities, 17 local sewer districts and more than 1.7 million residents across a 420-square-mile area in King, Snohomish and Pierce counties.

The division's 700 employees plan and design new facilities, regulate the disposal of industrial waste, educate the public about pollution prevention, and manage a regional system of treatment plants, pipelines and pump stations that operate around-the-clock. Guided by a commitment to sustainable communities, WTD remains focused on resource recycling and renewable energy production as part of its effort to attain carbon neutral operations.

2018 ACCOMPLISHMENTS

Rainier Valley Wet Weather Storage project

The new combined sewer overflow (CSO) underground tank and sewer pipelines were completed and are ready to serve Seattle's North Beacon Hill and Columbia City neighborhoods by controlling stormwater and sewage into the Duwamish River during heavy rain. Designed by in-house engineers, it demonstrates division employees' capabilities on complex interdisciplinary projects.



Denny Way Regulator Station upgrade

Construction work was completed at the Denny Way Regulator station in Myrtle Edwards Park on Elliott Bay, which is a part of the Mercer/Elliott West system. The sampling equipment was updated and a sampling room was added to the facility.

Summer treatment plant maintenance

Operations employees were able to complete summer equipment maintenance projects at the South, West Point, and Brightwater treatment plants. Plant improvements included gas-water separator installation, water reuse facility upgrades, vital controls testing and digester cleaning and repair. While the maintenance often takes complex coordination and timing with operations, it greatly increases system reliability, protects employees, and increases the level of service to a rising number of ratepayers in the growing region.

South Magnolia CSO pipeline installation

King County installed a new 3,000-foot pipeline in Seattle's Magnolia neighborhood in place of the existing broken pipe. The contractor used a trenchless construction technique called "pipe bursting," which uses a machine to pull a new pipe through the existing pipe corridor. The pipe will enable King County to store excess

stormwater and wastewater from the combined sewer system until it can be treated at the West Point Treatment Plant. The Magnolia Wet Weather Treatment Station helps protect Puget Sound water quality during heavy rains.

Equity training

Making good on its commitment to and support of racial equity and social justice (ESJ) training, 700 WTD employees received special ESJ training in 2017-18. The training enhances employees' understanding of the concepts of racism and privilege and how they manifest in the workplace. The efforts are to ensure the division's workplace culture is one where everyone can experience respect, dignity, and feel engaged to perform well.

Sustainability award

King County's Georgetown Wet Weather Treatment Station earned the coveted "Platinum" rating from the Institute for Sustainable Infrastructure's Envision rating system. This is the first Platinum-awarded Envision project in Washington. The Institute for Sustainable Infrastructure's Envision rating system assesses sustainability in five categories: quality of life, leadership, natural world, resource allocation, and climate and resilience. These contribute to positive social, economic and environmental impacts on a community during the planning, design and construction of infrastructure projects.

OUTLOOK

In 2019 and beyond, WTD is working on the Clean Water Plan for expected growth in the region. Planning and building new wastewater infrastructure is complex and can take a decade or longer from initially identifying a project need to completing an operational facility.

Over the next few decades, the region will invest billions of dollars in King County's wastewater treatment system. With many pressing priorities arising, King County is planning ahead so that the right investments are made at the right time.

In addition to the Clean Water Plan, the division is working on several upcoming projects:

- The WTD Capacity Charge update and an affordability study and rate structure study legislation, and developing a plan for implementation in 2019.
- The Coal Creek sewer upgrade project, including a pipe path and construction method for a new, larger Coal Creek trunk sewer pipe.
- The Lake Hills and Northwest Lake Sammamish sewer upgrade project, which continues to make progress on the final design.
- The Sunset/Heathfield project is on schedule to be completed in 2020. The pipe installation work, originally projected to be done at the end of 2018, will continue through late spring 2019.
- The North Mercer Island and Enatai sewer upgrade project continues through planning and design phases that will replace pipelines installed in 1970 that serve north Mercer Island, southwest Bellevue, and the town of Beaux Arts Village. The new lines will serve these communities for the next 60 years.



MISSION

King County's Wastewater Treatment Division protects public health and enhances the environment by collecting and treating wastewater while recycling valuable resources for the Puget Sound region.



Beth Shepherd Photography

DNRP *Financials*

DNRP Rate Summary

	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2018 Actual
Solid Waste Enterprise											
Rate per ton at SWD transfer stations	95.00	95.00	95.00	95.00	109.00	120.17	120.17	120.17	120.17	134.59	134.59
Change from previous year	15.2%	0.0%	0.0%	0.0%	14.7%	10.2%	0.0%	0.0%	0.0%	12.0%	0.0%
Regional Direct Fee (\$/ton)	80.00	80.00	80.00	80.00	93.50	93.50	93.50	93.50	93.50	114.00	114.00
Change from previous year	15.1%	0.0%	0.0%	0.0%	16.9%	0.0%	0.0%	0.0%	0.0%	21.9%	0.0%
Wastewater Treatment Enterprise											
Monthly rate per household (\$/RCE)	27.95	31.90	31.90	36.10	36.10	39.79	39.79	42.03	42.03	44.22	44.22
Change from previous year	0.0%	14.1%	0.0%	13.2%	0.0%	10.2%	0.0%	5.6%	0.0%	5.2%	0.0%
Surface Water Management Program											
Monthly rate per household¹	9.25	9.25	9.25	11.08	11.08	12.58	14.29	14.29	14.29	20.04	20.04
Change from previous year	0.0%	0.0%	0.0%	19.8%	0.0%	13.5%	13.6%	0.0%	0.0%	40.2%	0.0%
Inflation Rate (Change from previous year)²											
Seattle Consumer Price Index (CPI)	4.2%	0.6%	0.3%	2.7%	2.5%	1.2%	1.8%	1.4%	2.2%	3.0%³	3.7%

NOTES:

- 1. Billed annually with property taxes
- 2. Source: U.S. Bureau of Labor Statistics (CPI-U for Seattle MSA)
- 3. For 2017-2018, forecasted change are based on adopted OEFA Aug 2018 June-June Average Seattle CPI-W forecast.

Department of Natural Resources and Parks 2017/18 Biennial Budget¹

King County Executive	Operating (\$Millions)	Capital (\$Millions)	FTE's
DNRP Director²	16.3	N/A	32.0
Wastewater Treatment	837.8	627.3	623.7
Water and Land Resources	139.0	261.3	364.9
Solid Waste	278.3	70.8	406.5
Parks and Recreation³	97.9	99.8	224.1
Totals	1369.37	1059.18	1651.2

NOTES

- 1. King County appropriates budgets on a biennial cycle, so the figures represent two years of expenditure authority, including supplemental appropriations.
- 2. Includes budget for Historic Preservation Program (4.0 FTE's) and Community Services Area Program (4 FTE's).
- 3. Includes operating and YSFG expenditures.

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Environmental Stewardship in King County

2018

**King County Department
of Natural Resources and Parks
Annual Report**



King County